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RANDOM SHOTS

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Past Follies of Reclamation

WITH

Suggestions as to Remedy.



BY L. F. MOULTON.

Pacific Press Print, Twelfth and Castro Sts., Oakland.
1890.

THE GEN. JOHN BOWELL
HISTORICAL COLLECTION

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FOLLIES OF THE PAST.

PRETENDED RECLAMATION or Brush and other swindling Dams, one of which was built across the east side of the Sacramento River trough by Parks, costing me ten years litigation and twenty thousand dollars to only partly remove, and a dam on west side, built by Reed, in addition to the Knight's Landing Ridge, together with Parks' Hydraulic Brush Dams, that cost the State millions, and other errors, have especially allowed the *floating* sands and *pipe clay* to fill up our rivers and bays and form bars across the only good harbor on our western border, and destroy channel for our new *Charleston*, and other war vessels disabled in battle, to run to our only (once) good harbor and navy yard at Mare Island, that lately imprisoned a French war ship, until released by an exceptionally high tide. Our national Government which improves instead of allowing rivers destroyed in other States, has been accessory to the deplorable condition of her navigable waters in this State.

Reclamation drainage, tide gates at Cash Slough, and levee on north bank of Steamboat Slough, with tide gates through the same to drain off four feet of the vast basin above, with jetties on south to turn waters gradually into river and thereby dredge river channel below, together with helping dredge out hydraulic deposits above in Steamboat Slough.

Only one drainage canal is needed, and that on west side of Sacramento River. Any canal on east side of river or any of the basin or troughs could not be found in flood time with a sixteen-foot pole.

Remove all possible obstructions, facilitate escape of flood waters instead of filling river with hydraulic sand and dams.

Follies of Reclamation.

HAVING been deeply interested since '52 in the valleys of the Sacramento and its tributaries, I have made their protection and improvement a constant study.

For thirty-seven years I have thought, talked and written numerous letters and pamphlets on this vital subject. Also, I have prepared a great number of elaborate and costly maps and distributed them free and taken care to keep them in public places. I have bought a steam engine, type and machinery, and printed free supplements by the hundreds of thousands, paid expenses of paper, printing, expressage to sixty-seven newspapers of the State. I have made many surveys, run many lines of levels for levees, canals, etc., which have been utilized by Surveyor General and State Engineer.

I went down to run the levels across Montezuma Hills with Mr. Egbert; but we procured another to run them. On my way home I run a line of levels from Yolo and Colusa pond, one-fourth mile across ridge, at Knight's Landing. I found over six feet could be drained (and at that time the river was only one foot below high-water mark), from the upper pond, and this would not raise the lower pond but a few inches, and that only while the water was passing through the ridge at Knight's Landing. This six feet, later on when lower, Cash, or Putah Creek basin should have drained off, could be drained to fifteen feet. This would drain the entire trough on the west side of the Sacramento River in time to raise many different and valuable crops that season, instead of waters

being penned up to breed sickness, death and financial ruin to the owners.

From these and other examinations I concluded that the right thing to do was to commence at Sample Bend on westside of Sacramento River, and three miles above Colusa, leave through a substantial levee a waste way, or I will call it a blow off for great floods. As these expensive levees in this natural depression break nearly every year and cost large sums of money to repair them, this overfall would not let out but little water, and that for a few days in highest time of flood, and would be safer to district of country below, and not fill this pen made by bad engineering. In order to pick up plain and hill water, north and west of this point, I would make a canal, throwing all dirt on southeast side, and running southwesterly to west edge of trough, down to and through the ridge at Knight's Landing.

Below Knight's Landing, Cash and Putah Creek floods are so boisterous it would be more difficult to control the hill and plain water, especially as Feather River basin, and surplus of Sacramento River spill over into the west side reservoir, there to remain until too late for any kind of crops.

Again, the Feather, and especially the American Rivers are so *steep* that they bring over into and clog up the Sacramento River with what hydraulicers and their editors and engineers called sheep wash and ploughed land which overtops levees on Yolo side, and runs into Yolo basin. These, and other causes combined, would make it expensive to make a canal down to and through Montezuma Hills. According to my original plans, a cut through these hills would cost millions, and have been estimated for a mere drain ditch from three to seven millions of dollars. And to be of any value would probably cost more than will for the present be expended on a doubtful scheme. And instead of this costly cut that would

not *elevate* any tule reservoir water, Marsden Manson recommends a short and cheaper cut, and *it* would not *elevate* the *bed* of the tules either; and both would require more fall through the ditch than in the river itself.

Instead of above expensive canals, I have advocated using Cash Slough with tide-gates, to drop down in the summer and tide-gates in a levee along the north bank of Steamboat Slough that would drain off four feet of this vast reservoir above. It would be necessary in order to prevent current running across over country to south to use piles, brush and dirt, and turn the water gradually down the Sacramento River, and thereby use this clear tule water to force along the sands that now choke the river. By deepening river at this point, the water above would have increased fall and enough to *deepen* river above.

WINTER FLOODING

I have advocated the idea for many years, and finally read a paper before the Horticultural Society in Supreme Court room, I think in '85. Page 286 to 90. Report of '85-6. In which I publicly advocated, first, the leaving overfalls and levees similar to the one above described at Semple Bend at head of west side canal, also for every three miles or so on both sides of the river, say three feet below top of levee, and each overfall to be on up river side above high, dry sloughs that should pick up the waters. There should be flood-gates to fill these dry sloughs through levees to run it out onto surrounding country to winter-flood the land. This would be sufficient water for all land except gardens and Chili clover. Only one flooding for orchards would be necessary, if followed up by *thorough cultivation*. On banks of these dry sloughs slight levees should be erected with flood gates through them, to let water out into

highest pens or checks; thence into next lower pen, and so on down to the trough or tule, and finally to the bay. But in most years this judicious use of what is now dangerous waters would be utilized and take the place of more expensive bonded irrigation. For these readymade little winter rivers being themselves graded canals, made so by the laws of alluvium, will *winter* and *spring flood* the adjoining land as far as they run, and then be used on greater flats below, and being cold water not so likely to crack certain kinds of lands not susceptible of immediate cultivation. Not so apt, being in cold weather to be sickly, and *never possible to injure navigation* at these high stages. But instead, leave the water in the summer to help transport the hydraulicers so-called sheep wash down to lower river and bay.

DECLARE DRY SLOUGHS RUNNING STREAMS.

Secondly. In this paper, I also proposed to have all dry sloughs made so by the action of running water, and having clearly defined banks, declared by law to be *running streams* and settlers on their banks declared to be riparian proprietors, and that any settler should have the right to demand that sloughs should run free through head gates as full as if no gates existed. But that he should only have right to bring it onto his land, but no right to turn it onto proprietors below him. But any other settler still below could demand that it should flow to him but not below him, and so on to end of all well defined sloughs controlled by levees on their banks, with checks and gates as above described.

Only one relief canal or drain is needed, and that is on west side of Sacramento River as above stated, from three miles above Colusa down to and through Knight's Landing ridge. If parties at Knight's Landing object to an open cut, then two arches or even one as large as the new Croton Aqueduct, viz.,

thirteen by thirteen feet, two hundred feet long, would have relieved one hundred thousand acres of land above, mostly filled by hill water. This would not hardly been noticed on pond below Knight's Landing.

Parties writing about the lower west side canal drain have on paper brought it up to the *only actual obstruction*, the *ridge* at Knight's Landing. There, seemingly afraid to attack a few-thousand-dollar job that is *absolutely necessary* to let out the *only penned up* waters, for on east side of river and other basins and rivers to the east, they are all natural canals, already in good running order. And a canal through these other basins could not be found by a sixteen-foot pole in flood time.

Having for thirty years been writing, surveying, and advocating my theories of reclamation and drainage, State Engineer Ham. Hall wrote and requested my views at length. I wrote in reply, a pamphlet and extensively distributed it addressed to him, and I have had the satisfaction of seeing in his report my views sustained up to Knight's Landing, but no further. Also, that other able authority, Marsden Manson, approves same course up to Knight's Landing, and there stops short of opening the only great outlet to the upper basin. Another authority, State Commissioner Green, with Matthews and Bost, reported in favor of taking relief canal out fifteen miles above Colusa down through east side trough. But last year Mr. Green saw his error and recanted, and adopted my maps and plans above described and the San Francisco *Chronicle* at once published his map and adopted it as a correct plan.

I have always claimed we could hold water between mile apart levees down to the Semple Bend, being head of my west side canal. Below that point, the river having much less grade and narrower between ancient firm banks. The levees are

now actually well made above the Semple Bend and only needing some work on places never yet completed.

On west side, and two miles below Colusa, a twenty-foot levee has slipped into the river, besides several other breaks, and that where river is running north of east for four miles, and where river floods used to run across river into Reed's pen, and then down to Knight's Landing ridge where water has been in Reed's pen four feet higher than water in the river, and the same time river being at high flood, he had to cut his levee to let this water out to save his house from washing into lower basin instead of letting water cut its own channel when it was running over the ridge, the ridge some three hundred yards, into lower basin that would have freed his pen above and saved fifty thousand acres of grain in upper pond that year. But instead he built a dam across lower end of his pond, and backed water on to the settlers above.

The Paine break two miles below Sacramento, that our worthy Governor has so promptly called our very efficient delegations' attention to in Congress, is like the break two miles below Colusa. The river is in danger of running into Reed and Rose's pen on west side, the same as Paine's break is in danger of running into Yolo tule, and spreading out over tules, and both are endangering navigation in another way by forming a *bar below break* that will stop steamboats. This will show to farmers above the break that Colonel Mendall underestimated the value of the river. For, as an example, wheat at my warehouse would have to be hauled twenty miles across slickens country to railroad on the east, and twelve miles and no ferry or bridge across the Sacramento River to railroad on the west.

The *Examiner*, *Chronicle*, and others of our best papers have the thanks of our farmers for answering

Colonel Mendall in belittling the value of this noble river of such inestimable value for transportation, irrigation, winter-flooding, drainage, and for cheap transportation.

When Eads, Knox, Hall, Parks and others were at my house, I submitted to this greatest of living engineers the problem of closing wholly or in part, Butte Slough. Eads and his assistant, Colonel Andrews, agreed with me that it was best to fill up the bottom of slough by mattresses, piling and other well-known appliances, say two-thirds way up to natural banks, so as to hold as much clear water in the river to carry along sands at spring or medium stages of water, especially down past the mouth of Feather River, and to gravel bar below its mouth. And I hold as correct the same theory about the Paine break. I think in extreme high floods, it is safest both for Sacramento City and River itself, for the steep American River to have a blow off into the tules, for the hydraulic mountains of sand and gravel. This is the only place in the valley steep enough that *slickens* can be successfully and without injury, carried to the tule to build up a kind of poor land.

It has been advised especially by papers that favor Park's brush dam scheme, that the meeting at Sacramento on Jan. 17th shall not discuss any engineering plans but confine meeting to a prayer, to implore Government to undo what it has done. I think no harm can be done by fair discussion. I have been fighting bad measures for the last thirty-three years in the legislature. It is well known that I was the only farmer from the country that saw the cussedness of Park's dams, that has cost the State, and others many millions of dollars. I opposed it in one of the largest audiences ever assembled in the assembly chamber and combatted several of the best orators in the State, General Williams, General Hamilton, Creed Haymond and others, besides politicians like

Parks, engineers like Mendall, and others. It was here that I still urged the selection of Captain Eads to come here and help solve these great problems. After trying for three years, I had the satisfaction to get him here, but not until this Parks' brush dam contract had been let. But some are so unfair as to lay the follies of this monster swindle onto this, the most eminent engineer, and soon they succeeded in elbowing him out of the State.

This infamous measure I fought eight weeks in the legislature, but they finally passed the bill after I had made it some less objectionable. Now the signs in seeing some of the same ilk in the lead of this coming meeting, some that have caused more ruin than Parks himself, made me ask is it possible that this is a second edition of this bad brush and stone dam measure? After spending more money than all other private individuals together in the anti-debris fight, I have been, and so have my neighbors on east side of river in Colusa Co. been, ignored, perhaps to enable them the better to carry out their schemes to make a dump of our country on east side of river where, the water drained off in last flood; where it was over-flowed in forty-eight hours, doing good instead of hurt to the crops, or in other words, we have a drainage instead of a pen to hold water like Reed and Rose on west side of river.

Our river and upper bays are admittedly almost ruined by hydraulic vandalism and by no fault of the farmers or cities in the valley. Our government overlooked the ruin to her rivers, bays and entrance to the only good harbor along the western border of our great nation. This harbor so incalculably valuable in time of peace, and more especially in time of war, together with her only site for a good navy yard on this coast is about destroyed.

Mare Island which is filled with light pipe clay, a little thicker than water and thinner than mud, has

imprisoned a French ship-of-war in her dry dock until relieved by an exceptionally high tide.

What a misfortune the agents of our government on this Coast should not have found out what they thought to be sheep wash and ploughed land, was pipe clay and other fine sediment that runs over their empounding dams to the ruin of Mare Island, navy yard and formation of bar across mouth of harbor. And that soon, if not stopped, will destroy it for deep draught vessels, at least; then Irving M. Scott's genius in building great navy ships for the Coast defense will be of little use.

Now what can the government do to remedy the mistakes their agents have made in allowing this, the noblest of harbors and rivers being destroyed? Common sense replies, Stop by all the power of government, if necessary, the cause. Allow no more debris and no more brush or stone dams to be built in waters over which the government has control, or to be built anywhere where waters are freighted with even fine debris and can get to the rivers.

Make the works at Cash Slough, as above stated, dredge out Steamboat Slough and put dirt on its north bank, with tide gates in these levees with jetties on south bank, to gradually turn *clear tule* water down through the river channel to scour out sand below. Then work on up the Sacramento, bettering widening and deepening its channel; filling up and leaving overfalls at Paine's break, and Gray's Bend or mouth of Feather River; partly close Butte Slough to save clear water, to help wash out the river sands below. Clear out the trees and snags, dredge out the bars.

Then afterwards, if found necessary to secure for scouring purposes, the foot hill waters of Cash and Putah Creeks and water from Semple Bend canal, then the canal might be continued around west edge of lower basin to Sacramento River at Cash Slough,

especially, if levees were built along banks of Sacramento River strong enough to hold its flood waters. But, for reasons above given, I think it would be for the present at least, impracticable. But under no pretence should the Sacramento River be "*crossed*" by a canal, as formerly proposed by the State Commissioners Green, Matthews and Bost, and as now again advocated by one of that old State Commissioners. For at Gray's Bend the river is very crooked, narrow and a very slight fall, not enough fall now to carry heavy sand. And there it turns from its general south course to north of east, and seeming to run up stream to its confluence with the very steep Feather River, heavily ladened with heavy sand and gravel; especially at this point, this very crooked reach need all the *clear* upper Sacramento waters to help move the gravel now piled up below the mouth of the Feather River.

In handling this great problem no reckless schemers like those of the past should be allowed to direct it, and especially no engineers in sympathy with or apologizing for the vandalism that now causes these present misfortunes, should be allowed to parcel out the money. But instead, these commissioners, like the great German Commissioners, should be so high in the confidence of the people that they would be held above considerations of religion, politics or war.

L. F. MOULTON.

